ISLANDS IN THE BUSH: MANAGEMENT OF GRANITE OUTCROPS

WORKSHOP: Fauna Reconstruction

The need for reconstruction

From the point of view of fauna, there is a need for reconstruction for most (if not all) granite outcrops, with the obvious taxa being

- mammals, which are sometimes conspicious (*e.g.* rock wallabies) but usually aren't (*e.g.* small, nocturnal species);
- birds, none of which may be restricted to granite outcrops, but many species are conspicuous when present;
- reptiles, which may be common on granite outcrops and may be visible (*e.g.* the diurnal dragon lizard *Ctenophorus ornatus*) or nocturnal hence seldom seen (*e.g.* geckos);
- frogs, which may be easily heard as breeding choruses aroung granites, and observed as tadpoles in rock pools;
- invertebrates, an immense array of species ranging from relatively large and easily observed (*e.g.* large spiders) to minute and cryptic.

With respect to conserving species, it was discussed that the preference was to protect and nurture the species that are already present, and avoid translocation if at all possible. A primary need is to enhance existing populations and protect existing habitats. Translocation can disrupt genotypes, and have all sorts of biological implications and repercussions. For example, some translocated invertebrates could become pest species to other granite outcrop communities

A comment was that we need to look at the big picture. People (especially tourists) want to see cuddly furry animals. From the perspective of ecotourism, landscape management, and how we view the countryside, there is a need to see our native fauna back in the landscape. There was general discussion about this, and it was agreed that people also want to champion the invertebrate species as much as the native fauna.

If so, how do we do it?

There is an important role for the community in reconstruction of fauna – scientists are not likely to be the ones involved in the reconstruction although they may be an essential group. There is a need for scientists and government to work in partnership with local community groups.

There are a number of issues that need to be considered in fauna reconstruction;

- fauna survey booklet – a generally accessible booklet is required, to summarise survey procedures and provide information on identifying granite outcrop animals;
- education – it is especially important to change peoples attitudes towards the conservation value of invertebrates, by incorporation of invertebrates in signage (*i.e.* make invertebrates the "champion") and education of tour guides, including local guides;
- problems of small reserves – what granite rocks and of what minimum size, would you choose for fauna reconstruction, and what fauna groups are declining;
- long term baiting strategy for larger vertebrates – this is an extremely important issue for conserving the larger vertebrates; we need more baiting of other than CALM estate; baits need to be more accessible to farmers, *etc*, and baits need to be other than meat based.

What are the implications of successful restoration?

Short-term successful restoration of granite outcrops would have implications for long-term conservation of the restored environment and its environs.

- Adjacent landowners need to be able to control native predators and herbivores.
- Fox/cat control programs need to continue for a number of years (or indefinitely).
- Long-term restoration requires commitment from locals for restoration of granite rocks, and programs within local community involving local people
- Fox control is essential for restoration of ground-nesting birds – they are a "champion" for reconstruction as they
  - are vulnerable to predation,
  - need encouragement to breed up, and
  - stay within granite outcrops.

But, there is a danger of too many champions; they also need to be locally relevant to spark interest.

Translocations

Translocation is seen as an important tool for restoration of granite outcrops, but there are many complex issues related to the success or otherwise of translocation programs. There needs to be continuous monitoring, with follow-up; don't just translocate animals/plants and leave them. It is necessary to consider at physical conditions *e.g.* drought – don't translocate in drought season. It may be necessary to provide suitable

corridors for birds as well as mammals. It is necessary to consider how quickly different types of animals recolonize restored areas, and what resources they need in adjacent areas either for feeding or breeding. We need to understand the role of natural predators, and how they may impact lesser known plants and invertebrate species. It is difficult to know what numbers you put into a given area, and the required balance of fauna and flora for long-term stability.

Fungi are an important and under-considered aspect of revegetation. There is a lack of fungi in many areas, having been destroyed by cultivation/paddocks, and often poor soils lack fungi *e.g.* woodlands around rocks. Macropods and woylies probably significantly impact fungi.

Fire and water are significant considerations for adjacent farmers. An antidote for poisons such as 1080 is needed, to enable fox control without killing domestic stock/dogs.

What are you managing for?

- Number of conflicting controls
- Recognise choices/objectives of granite outcrops
- Control weeds/fencing
- Long term commitment for management – resources, where do they come from, local communities, govt., what about in 10-20 years?
- Aboriginal heritage – be aware of the significance of some granite outcrops to the Aborigines

Invertebrate Restoration

Reconstructing invertebrate habitats on granite outcrops is an important aspect of granites restoration. Even small details might be very important, such as replacing loose rock flakes near pools, and if possible/ practical replacing rocks back to bare granite slopes. Many invertebrates live under flat plates of rock *i.e.* require rock-on-rock not rock-on-soil. Lizards also need a scatter of slabs for shelter. Such physical restoration should recognise the need for diversity in the nature of rocks that are resplaced.

Ecotourism

It is important to recognise that restoration of granite outcrops involves economics, tourism and education. Ecotourism is one way of raising money for restoration projects. Tourists will pay to see the animals running about in restored granite outcrops and associated camping grounds, *etc.*

Education

Successful restoration of granite outcrops will be facilitated by educational involvement of all levels, from primary and high schools to universities. For example, Honours projects, and postgraduate projects, are a cost-effective a quick means for studying then planning and restoring granite ecosystems. There is a role of communities, especially at the primary and secondary school level, but also at the tertiary university level. Involvement of students in granite restoration projects can be facilitated immensely by local involvement, for example with free accommodation and travel.

Conclusion

Most granite outcrops have a current "purpose" and their role will be reviewed over the coming years from various viewpoints. It is hoped that CALM will ensure that rocks with conservation value will be managed by the necessary governing/local bodies, and that restoration and indefinite conservation can be managed by a combination of state and local government, involvement of the local inhabitants and land-owners, and students and scientists from local schools and state universities.

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